EPA United States Environmental Protection Agency

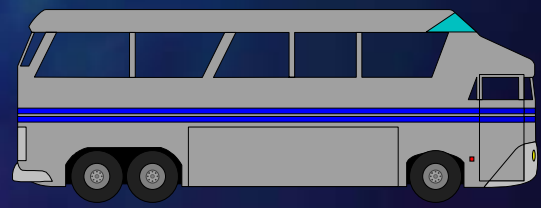
EPA DIESEL RETROFIT PROGRAM

Florida Environmental Essentials

October 15, 2003

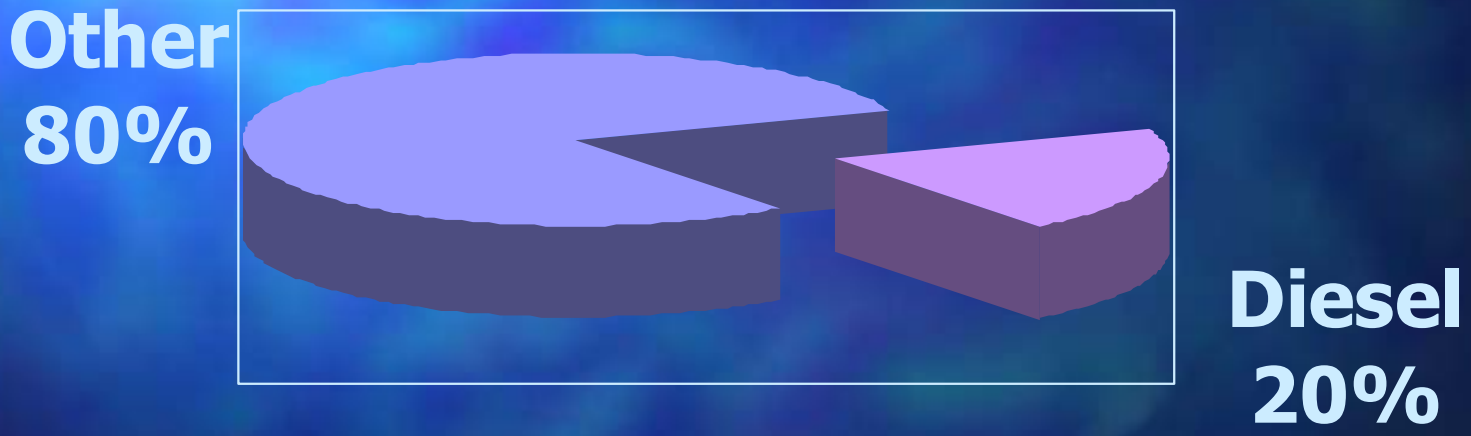
Dale Aspy

EPA, Region 4



Why are Retrofits Important

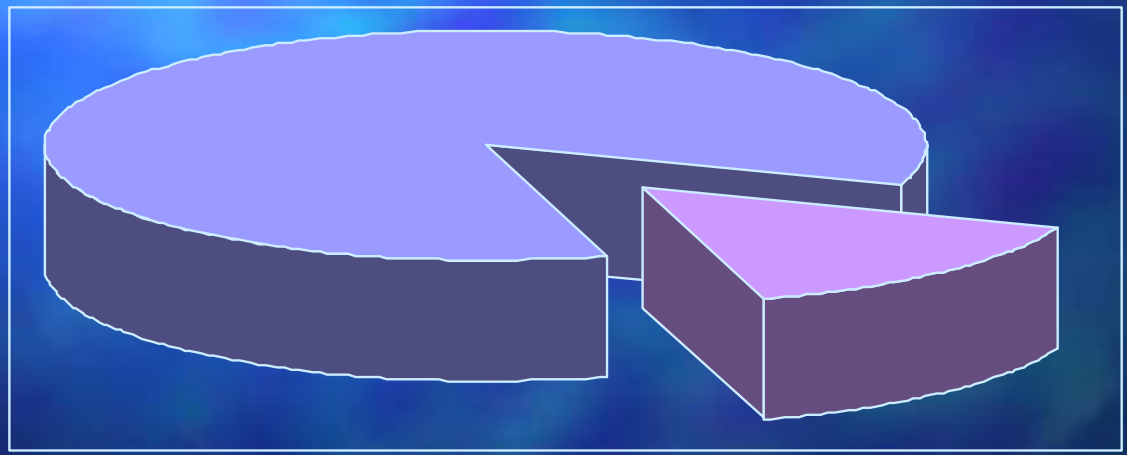
NOx Inventory



Why are Retrofits Important

PM Inventory

Other 85%



Diesel 15%

Why are Retrofits Important

- Serious health effects
  - Air Toxic
  - Respiratory effects
    - Especially children and elderly
  - Likely cause of cancer

Why are Retrofits Important

- Current and Future Programs
  - Urban bus program
  - 2001 technology review
  - 2004 heavy duty on-highway rule
  - 2007 heavy duty on-highway rule and diesel fuel requirements

Need for heavy Duty Diesel Retrofit Projects in Region 4

- Diesels have not had to meet as stringent emissions standards as gasoline vehicles
- Diesels drive more miles per year than other vehicles
- Diesels remain on the road for as long as 25-30 years
- Few engines but many applications
- Need exists to do something now versus waiting for fleet turnover

Voluntary Retrofit Program

- Will address emissions from existing fleets
  - Both on- and off-road engines
- Mechanism to initiate early reductions
- Developed under agency's Voluntary Measures Program guidelines
  - Allows SIP credits

Voluntary Retrofit Program

- Establishes strong, positive partnerships
  - EPA
  - State and local agencies
  - Industry
    - Engine manufacturers
    - Engine users
  - Environmental organizations
  - The public

Issues of Concern

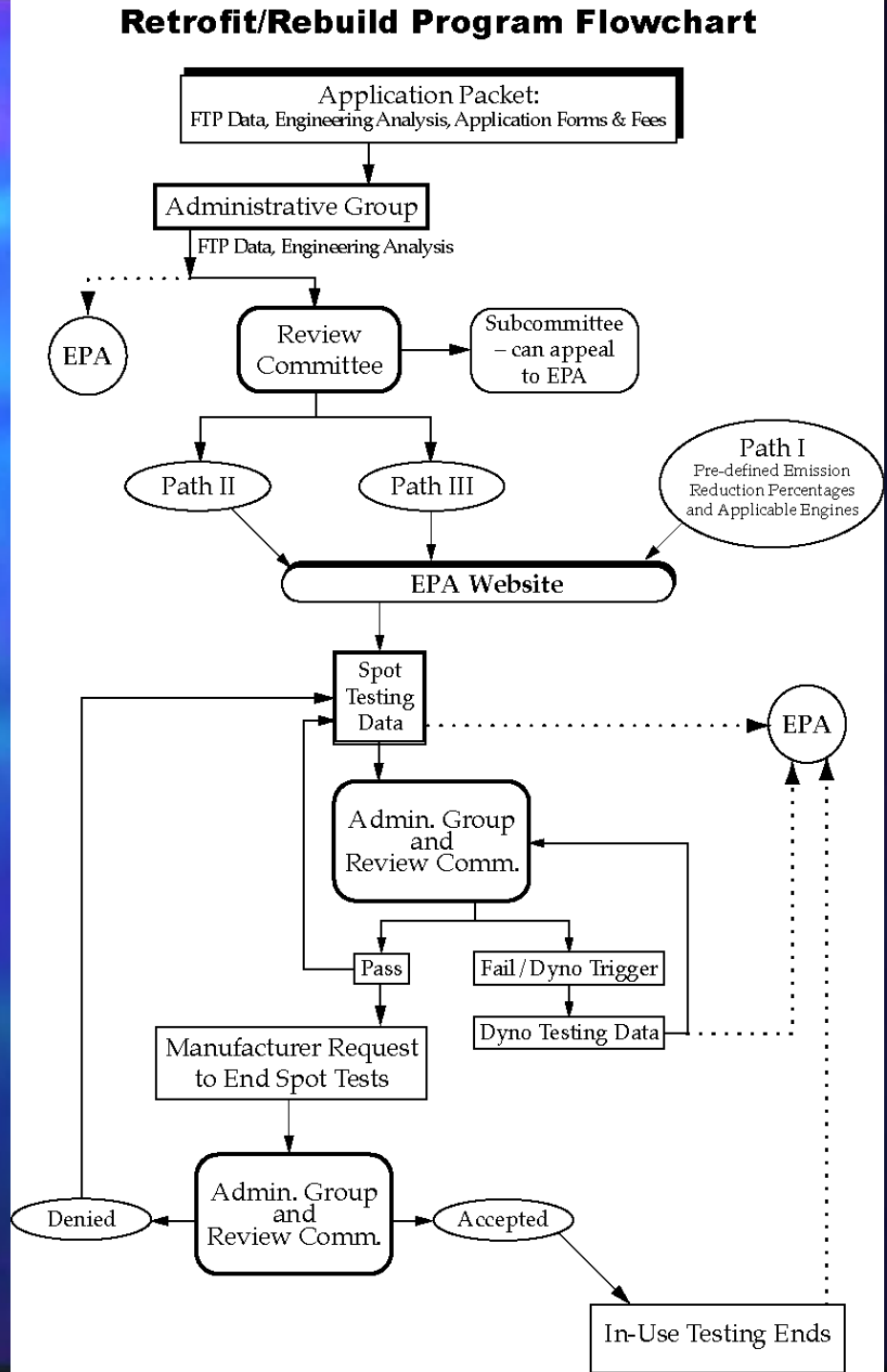
- **Definition of a retrofit**
  - **Catalyst or filter/trap**
  - **Engine upgrade**
  - **Early engine replacement**
  - **Use of cleaner fuel or additive**
  - **Combination of above**

Issues of Concern

- **Environmental justice**
  - **Low income or minority neighborhoods often have high concentrations of diesel emissions**
  - **Keep public involved**

VERIFICATION PROCESS

1. Application Packet
2. Review Committee
3. Path Determination
4. Testing Requirements
5. Web Posting
6. Spot Testing
7. Feedback Loop
8. Conclusion



Current Heavy Duty Diesel Retrofit Projects in Region 4

- **Retrofitting school buses with diesel oxidation catalysts**
  - **Birmingham-operational**
  - **Atlanta-operational**
  - **Asheville-Reviewing proposals**

All Received $75,000 grant

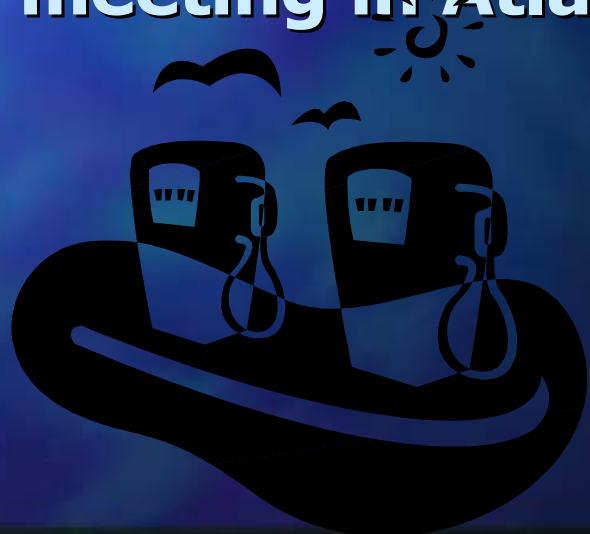
- **Closely cooperation between public/private entities**
- **Sensitivity of School bus operators and managers**

Future Heavy Duty Diesel Retrofit Projects in Region 4

- Proposed $85K pilot Tribal school bus retrofit program
- Discussing a smaller school bus project in an EJ area
- Looking for Non-Road applications, like airports and highway construction

Future Heavy Duty Diesel Retrofit Projects in Region 4

- Also working with OTAQ on securing Ultra Low Sulfur Diesel (ULSD) for the Region
  - Charlotte
  - October 29-30 meeting in Atlanta



Clean School Bus USA

- Public-private environmental partnership
- Goal to reduce children's exposure to air pollution from diesel school buses.
- Program emphasis areas:
  - Anti-idling Strategies
  - Engine Retrofit
  - Cleaner Fuels
  - Bus Replacement
- More information: www.epa.gov/otaq/schoolbus/

School Buses and Public Health

- **Several Issues:**
  - **exposure of riders to emissions**
  - **community impacts (ozone and PM)**
  - **Conflicting studies, research issues**
- **Sensitivity of School bus operators, school systems**

FUELS

- **Biodiesel**
- **Clean Cities**
- **ULSD**

FUELS-ULSD

- Charlotte "doing the right thing"
- Region 4 proposed technical amendments to 2007 rule
- Conducted Regional call, survey with interested states
- Oct. 29 meeting

Common Problem-Diesel Idling

- Numerous complaints from citizens
- Problem at truck stops, seaports, airports and depots
- Wasted fuel, excess emissions
- Truck stop parking space a problem
- Extent of problem unknown

Truck Stop Electrification

New Solutions that can address several issues:

- **Savings in Diesel fuel**
- **Reduced Emissions**
- **Community complaints on noise**

Truck Stop Electrification (TSE)

- Region has been vocal in promoting TSE
- One company has sites in Knoxville and Atlanta
- Region is working with Alabama state partners for a third site near Birmingham
- Region has proposed TSE for NEPA, P2

LOCOMOTIVE ANTI-IDLING

- **Atlanta effort**
- **Bartow County**
- **Charlotte**

SmartWay Transport

- Voluntary partnership created to reduce:
  - Fuel consumption from the transportation sector in the U.S.
  - Emissions affecting human health, especially in densely populated urban areas; and
  - Greenhouse gas emissions
- Establishes performance goals for carriers and shippers
- Strategies to achieve goals:
  - Idle reduction
  - Improved aerodynamics
  - Improved logistics management
  - Automatic tire inflation systems
  - Wide-base tiers
  - Driver training
  - Low-viscosity lubricants
  - Reduced highway speed
  - Lightweight vehicle components
- More information:
  http://www.epa.gov/otaq/smartway/

Funding Sources for Heavy Duty Diesel Retrofit Projects

- **Potential Funding**
  - Toyota SEP ($20 million total-deadline about December, 2003)
  - EPA School Bus Retrofit Program ($5 million total-deadline May 27, 2003))
  - EPA Heavy Duty Diesel Retrofit Program ($500k total-deadline May 27, 2003)
  - CMAQ
  - Environmental Justice
  - Supplemental Environmental Programs
  - Local sources

Additional Information

EPA website

www.epa.gov/oms/transp/vmweb/vmhvydty.htm

- Official guidance
- Application forms
- Emissions reduction calculator
- Certification data
- Verified technologies
- Example programs

Additional Information

- Region 4 EPA Points of Contact
  - Dale Aspy
  - (404) 562-9041
  - Alan Powell
  - (404) 562-9045